

# **ES410/460 Single Engine Simulators from Emulation Systems**



- \* Realistic Instruments and Controls**
- \* Realistic Aerodynamics**
- \* Wide Choice of Visual Displays**
- \* Powerful and Easy to Use Instructor Station**
- \* Up to 38 Aircraft Aerodynamic Profiles**
- \* Equipment Meets or Exceeds Requirements for  
FAA Levels 2, 3, or 5**
- \* Cost-Effective, Powerful, New Computer Technology**

**EMULATION SYSTEMS FLIGHT SIMULATORS INC.**  
3130 Skyway Drive #309 • Santa Maria, California 93455  
Phone (805) 349-1024 • Fax (805) 349-0824  
1(800) 865-1800



# Why pay more and get less? When you

## With cost-effective, powerful, new computer

### The ES410 Basic System

Standard configuration for the ES410 is a Cessna 172 with the equipment listed below. Up to 37 additional aircraft aerodynamic profiles can be programmed.

#### STANDARD EQUIPMENT

- Fuselage
- Instructor Station
- Visual System, ESV1 (with a 17" Monitor)
- Comprehensive PC System and Software
- Navigation encompassing a 200 NM diameter area centered around your home base (Virtual global navigation is available).

#### Instruments

- Airspeed Indicator
- Turn Coordinator
- Artificial Horizon
- Directional Gyro
- Vertical Speed
- Altimeter with adjustable barometric pressure
- Gyro Suction
- Fuel Gauges
- Engine Oil Temperature & Pressure Gauges
- Engine RPM
- Magnetic Compass (with realistic turn lead/lag feature)
- Ammeter
- NAV 1 Receiver with Aural Ident and VOR/ILS Indicator
- NAV 2 Receiver with VOR/LOC Indicator
- COM 1 & COM 2 Transceivers
- ADF Receiver and Indicator
- Hobbs Hour Meter and Aircraft Clock
- Pitch Trim Indicator
- Flap Position Indicator
- DME Transceiver
- Transponder with Ident Switch
- Marker Beacon Lights and Aural Ident
- Engine Sound Effects

#### Controls and Switches:

- Carburetor Heat Control
- Throttle and Mixture Controls (Vernier)
- Flap Control and Indicator
- Pitch Trim Control

- Radio Output Audio Selectors for Speaker and Phones
- Marker Bcn Rcvr with Audio Level/Test Switch
- Ignition Switch with Mag Positions
- Switches: Master (Battery, Alternator), Pitot Heat, Avionics Master, and Beacon Light
- Control Yoke (with PTT switch)
- Rudder Pedals with Toe Brakes
- 20 Circuit Breakers (e.g. Alternator, Flap Motor, Pitot Heat, Avionics, Turn Coordinator)

### The ES460 Advanced System

Simulates either a Cessna 172 RG or 182 RG aircraft, with 37 additional single engine aircraft aerodynamic profiles available. Custom panels available for Piper, Mooney, Beach, etc.



ES460 Instrument Panel

#### STANDARD EQUIPMENT:

All equipment listed above for the ES410 *plus*:

- Constant Speed Prop Control (Vernier)
- Manifold Pressure Indicator
- Retractable Landing Gear Switch
- Fuel Selector
- Electric Trim
- Dynamic Control Loading
- Dual Controls (Yoke & Rudder)
- Basic Visual Display System with 17" CRT and dedicated PC hardware and software.

#### Other Options Available:

- HSI
- RMI, Rotating Card ADF
- Dual Instruments
- GPS
- RNAV
- Weather Radar
- Larger Fuselages
- Motion System

For more information call 1(800) 865-1800  
or (805) 349-1024



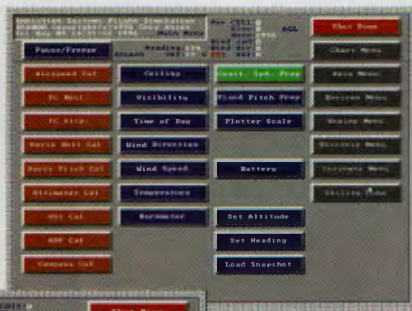
# can pay less and GET MUCH MORE!

## technology, Emulation Systems is years ahead.

### Instructor's Station

Using color VGA graphics the ES410/460 keeps the instructor informed with an on-screen, real-time, Moving Map Display which corresponds to real charts and frequencies. Clearly marked buttons make finding and using the advanced features of this simulator straightforward and easy. With the use of a friendly mouse-driven interface, the instructor can make important adjustments such as ceiling, visibility, time of day, and icing conditions.

The "snapshot" feature allows for quickly setting up repeated training maneuvers.



### VIDEO DISPLAY SYSTEMS

The ES410/460 come standard with an ESV1 visual display system. All visual display systems include a second dedicated computer, networked to the simulator.

Important adjustments such as ceiling, visibility, and time of day, are all controlled from the Instructor Station. The dedicated visual display computer assures a flicker-free 3D graphics rendering with a virtually undetectable latency time of only 27 milliseconds! The basic CRT Visual Display is available in a variety of CRT dimensions, including 15", 17" and 21". (17" is standard on the ES460 configuration.)

Advanced optics are an important consideration for any simulator visual system so that it can provide the feeling of depth and spatial dimension of an infinity focus. The very best of these systems uses a spherical mirror, providing for a wide field of view, more realism, and less eye fatigue.



#### Video Display ESV1

Basic Visual Display System including a dedicated computer graphics engine and 17" Display Monitor

#### Video Display ESV2

Same as ESV1, with two displays

#### Video Display ESV3

24" Spherical Mirror Visual Display with dedicated computer

#### Video Display ESV4

Same as ESV3, with two displays

#### Video Display ESV5

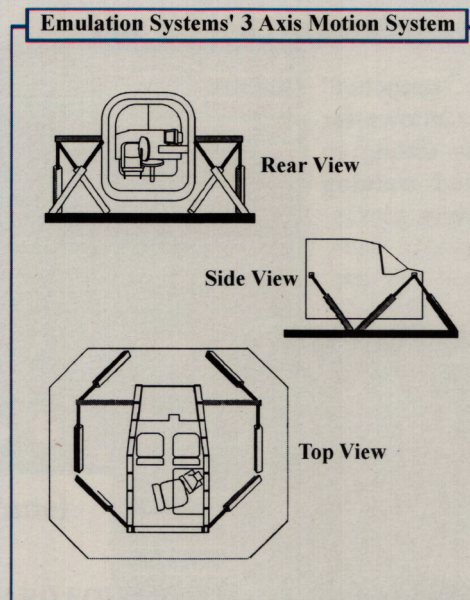
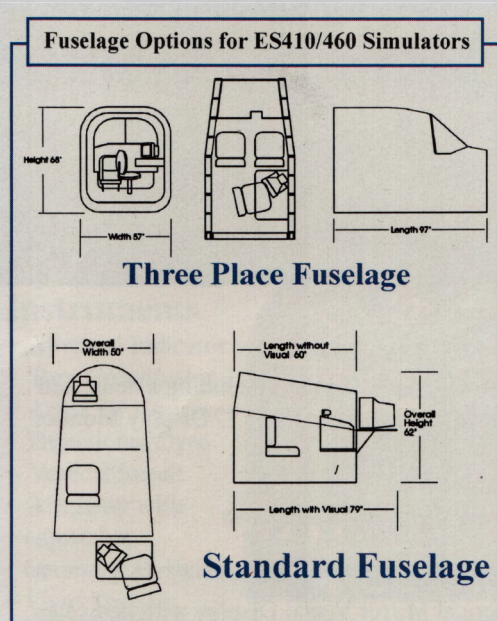
Our best visual system including a 48" spherical mirror collimated optics system and an advanced Graphics Generator



### FUSELAGE OPTIONS

- The fuselage provided with the ES410/460 systems provides enclosure for the pilot.
- A Triple Capacity Fuselage includes seats for a second pilot in front, and an instructor station behind the pilots.

- GPS
- RNAV
- Weather Radar
- Plotter (11"x 17")
- Dynamic Control Loading
- Flight Director / Auto pilot



### MOTION BASE

Provides 6-degree-of-freedom motion when attached to Triple Capacity Fuselage.

### GENERAL OPTIONS

- Electric Trim
- HSI
- RMI
- Rotating Card ADF
- Dual Controls (Yoke & Rudder)
- Dual Instruments

### Other Simulators We Offer:

Twin Piston  
Twin Turboprop  
Piston Rotor  
Turbine Rotor

**For more information call 1(800) 865-1800  
or (805) 349-1024  
Fax: (805) 349-0824  
E-Mail: [emsys@ix.netcom.com](mailto:emsys@ix.netcom.com)**